

Landsat Data Continuity Mission (LDCM) USGS Project Status Report

January 8, 2008

Mike Headley
USGS LDCM Project Manager
headley@usgs.gov
605-594-2644



Topics

LDCM

- ◆ Ground system development status
- ◆ Ground System Requirements Review (GSRR) results
- ◆ USGS acquisition strategy status
- ◆ International Cooperator participation in LDCM

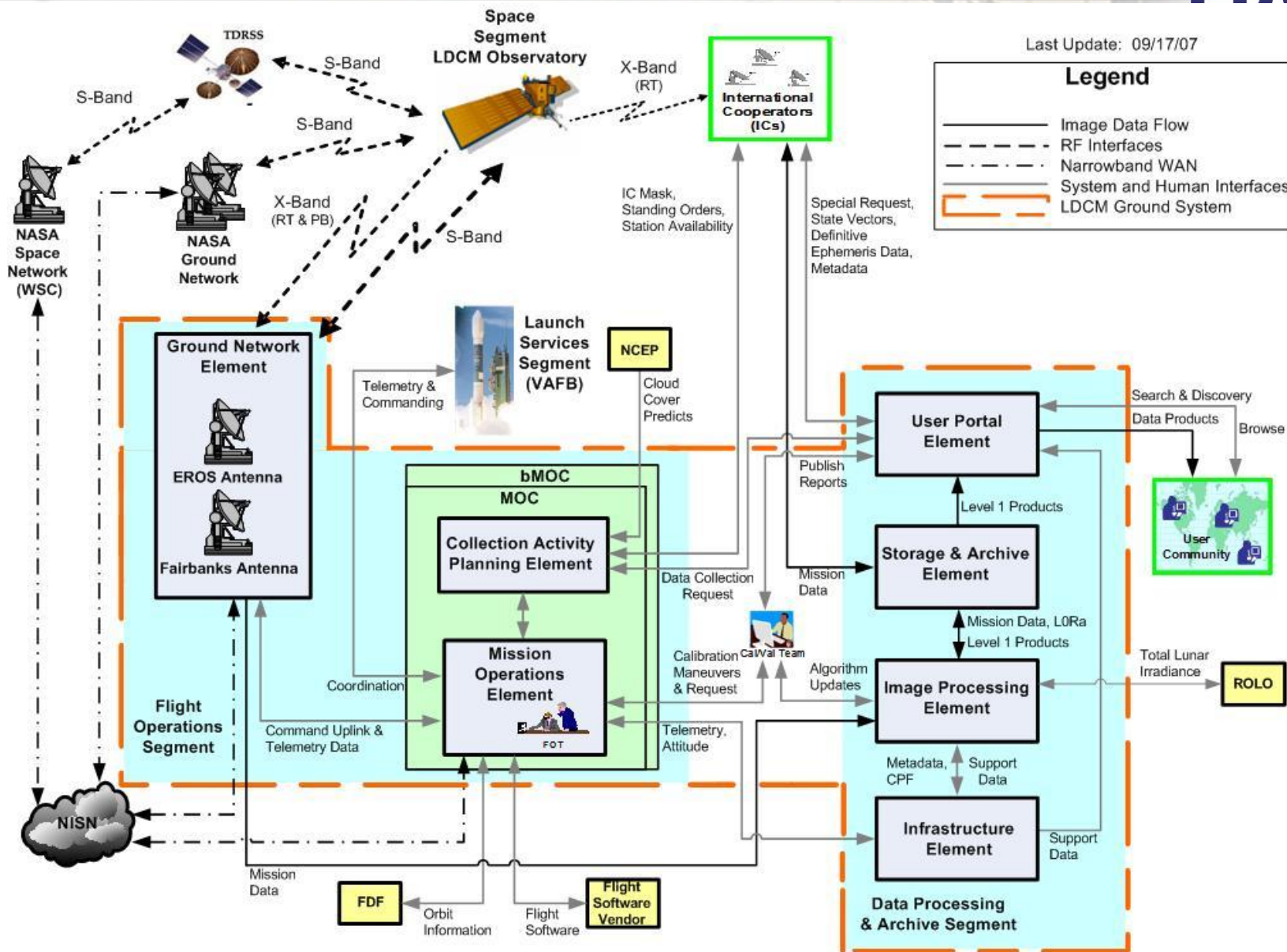
LDCM Architecture Overview

LDCM

Last Update: 09/17/07

Legend

- Image Data Flow
- RF Interfaces
- Narrowband WAN
- System and Human Interfaces
- LDCM Ground System





Ground System Development Status

LDCM

- ◆ Held the Ground System Requirements Review (GSRR) on Sept 26-27
 - ◆ First major, independent review for the LDCM Ground System
 - ◆ Reviewed Segment level operations concepts and requirements
 - ◆ Described approach and schedule for managing, implementing, and testing the LDCM Ground System to reach operations readiness
 - ◆ Received only 17 Requests For Action (RFAs) – i.e. “action items”
- ◆ Currently developing the ops concepts and requirements for each ground system element & holding element SRRs through March 2008
- ◆ Preliminary design work for some elements has already commenced
- ◆ Ground System Preliminary Design Review targeted for Sept 2008



GSRR RFAs of Interest

LDCM

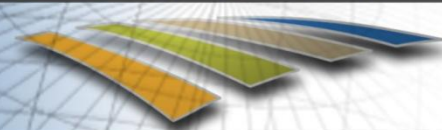
- Planned data distribution volume may be too low at 1250 scenes/day
 - Resolution: Update our sizing analysis to show that 1250 scenes/day with a 10X expandability requirement is sufficient
- L0R should be added as a standard data product
 - Resolution: Developed an estimate and proposed addition of a requirement to distribute 100 L0R scenes per day as a second “standard” product
- Reprocessing requirements need examination
 - Resolution: Adopted an “on-demand” processing approach that limits required reprocessing
- Sizing of the online disk cache of L1T data needs better definition
 - Resolution: Defined data cache sizing as a configurable design choice along with implementing an “on-demand” processing approach
- On-line data access performance requirements need refining
 - Resolution: Establish element level requirements to document expected performance of online data access and download mechanisms



USGS LDCM Procurement Status

LDCM

- ◆ Ground antenna / network services procurements planned for mid 2008
- ◆ Flight Ops Team (FOT) procurement RFP release planned for Q1 2008 with a contract award in Q3 2008
- ◆ MOC Facility (at EROS): Facilities modifications planned in 2008/9
- ◆ Remainder of ground system being procured through separate contracts in late 2007 / early 2008
 - ◆ Landsat Data Continuity Contract (LDCC)
 - ◆ EROS Technical Support Services Contract (TSSC)



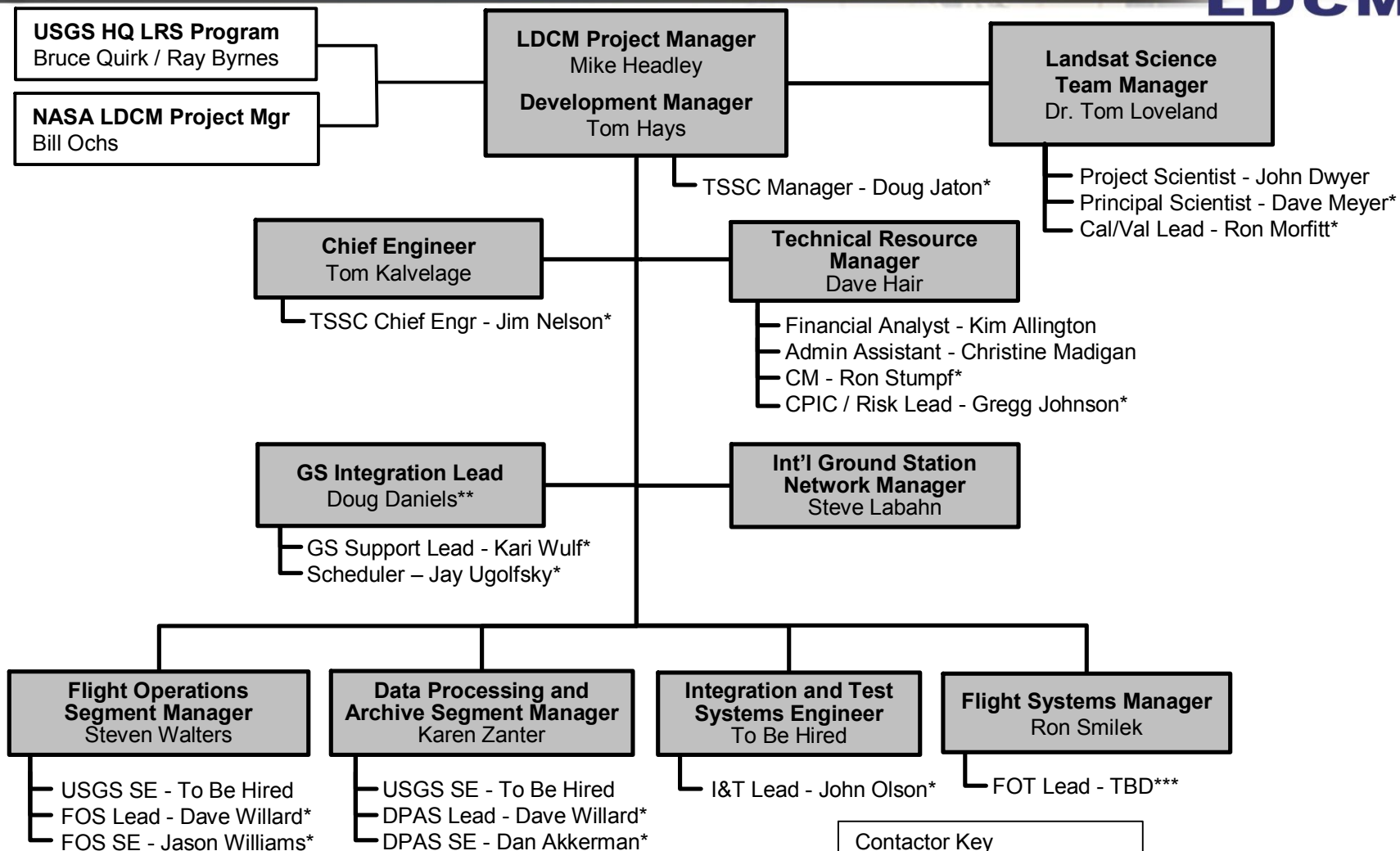
International Cooperator Interest in LDCM

LDCM

- ◆ USGS provided ICs a questionnaire soliciting interest in LDCM
- ◆ Several ICs responded
 - ◆ Argentina, Australia, Brazil, Canada, China, ESA, Germany (DLR) Japan (HIT - Hiroshima Institute of Tech.), Japan – RESTEC, South Africa, Thailand
- ◆ All expressed interest in continuing as ICs into the LDCM era
 - ◆ All prefer to receive LDCM data via a direct downlink
 - ◆ Some expressed interest in also receiving L1T data via the internet
 - ◆ Many ICs desire having control over the processing “recipe”
 - ◆ Good support for thermal imaging expressed
 - ◆ Questions asked about IC role in LDCM scene collection priorities

USGS LDCM Project Organization

LDCM



Contactor Key

- * EROS TSSC (SAIC)
- ** The Aerospace Corp
- *** Flight Ops Team (TBD)